



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,262	10/26/2000	Dirk Daecke	P00,1843	3837

7590

01/12/2006

SCHIFF, HARDIN & WAITE

Patent Department

6600 Sears Tower- 233 South Wacker Drive
Chicago, IL 60606

EXAMINER

ELALLAM, AHMED

ART UNIT

PAPER NUMBER

2668

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/697,262	Applicant(s) DAECKE ET AL.	
	Examiner AHMED ELALLAM	Art Unit 2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is in response to amendment filed on 10/5/2005. The amendment has been entered.

Claims 1-14, 16, 22 and 23 are pending.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-8, 14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Bartholomew et al, US (6,400,708).

Regarding claim 1, with reference to figures 1-3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising:

- channel bank 31 for inserting data belonging to terminal equipment 29 (telephone) and 25 (computer), Bartholomew further discloses ISDN frame for concurrent voice and data, see column 1, lines 39-49, and column 9, lines 3-20. (Claimed transmission unit for inserting data belonging to at least two terminal equipment types or services that are capable of including both voice and data in a common frame having a frame length);
- the channel bank comprising a Multiplexer/Demultiplexer 75 for inserting data of the terminal equipments (telephone 29 and computer 25) , and using DS0

slots for transport over a T1 line, see column 12, lines 60-67 and column 13, lines 1-31. In addition Bartholomew discloses having other DS0 for EOC (embedded operations channel) which is used for control (claimed common channel for operational control); see column 11, lines 63-67; column 12, lines 1-19, lines 60-67 and column 13, lines 1-31. (Claimed insertion mechanism for inserting the data of the at least two terminal equipment types, the data of all terminal equipment types being synchronously inserted into the common frame with a common channel with operational control and transmitted with a digital time-division multiple access technique).

Regarding claim 2, with reference to figures 1-3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising:

- channel bank 31 for dividing a data stream transmitted in a frame by a multiplexer 81 (Fig. 2) to a terminal equipment 29, 25, (claimed a reception unit for dividing a data stream transmitted in a frame, the frame comprising data belonging to at least two terminal equipment types or services that are capable of including both voice and data, by a transmitter to at least one terminal equipment of the at least two equipment types);
- the channel bank comprising a Multiplexer/Demultiplexer 75 (claimed switch module) for demultiplexing the data stream received to its destined terminal equipment (29, 25), wherein the EOC (embedded operations channel) is used for control (claimed control data); see column 11, lines 63-67; column

12, lines 1-19, lines 60-67 and column 13, lines 1-31. (Claimed a switch module for a purpose-conforming division of data stream transmitted in the frame, in which a further division onto further terminal equipment types or services is undertaken based on control data).

Regarding claim 3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising a transmission reception as indicated in claim 1 and reception unit as indicated in claim 2.

Regarding claims 4 and 16, with reference to figures 1-3, Bartholomew discloses a method in a circuit arrangement (Fig. 2) for ("synchronously" as in claim 16) transmitting a data stream in a common frame belonging to at least two terminal equipment types or services that are capable of including both voice and data, comprising:

channel bank 31 (claimed first unit) for inserting data belonging to terminal equipment 29 and 25, the channel bank comprising a Multiplexer/Demultiplexer 75 for inserting data of the terminal equipments (telephone 29 and computer 25) , and using DS0 slots for transport over a T1 line to a channel bank 39, (claimed second unit) see column 12, lines 60-67 and column 13, lines 1-31, Bartholomew further discloses ISDN frame for concurrent voice and data, see column 1, lines 39-49, and column 9, lines 3-20, the frame comprising EOC (embedded operations channel) which is used for control (claimed common channel for operational control); see column 11, lines 63-67; column 12, lines 1-19, lines 60-67 and column 13, lines 1-31. (Claimed synchronously inserting

data of at least two terminal equipment types or services into the frame in a first unit, and transmitting the data to a second unit with a time-division multiplex method);

wherein the channel bank 39 (second unit) has a Multiplexer/demultiplexer 81 for dividing data stream (T1) to terminal devices of terminal equipment 3, 7 (Figure 1). (claimed dividing data stream in said common frame to terminal devices of at least one terminal equipment type in the second unit).

Regarding claim 5 and 6, Bartholomew discloses using ISDN (Integrated Services Digital Network) in which an EOC (embedded operations channel) channel is used, and that two of time slots transport the two bearer (B) channels, the other slot transports the embedded operations channel (EOC) and the data (D) channel for the one subscriber's ISDN service (2B +D channels). See column 10, lines 48-56, column 14, lines 16-31, column 15, lines 59-67 and column 16, lines 1-12. (Examiner interpreted the eoc for control of both the 2B channel (connection and part of D channel (connection) as being the claimed depositing data for operational control of connections to which at least two terminal equipment types or services that are capable of including both voice and data are connected in a single operating eoc channel of the frame as in claim 5 and connections are ISDN connections as in claim 6).

Regarding claim 7, Bartholomew discloses with reference to figure 1, that a customer at premises CP-3 can use two DS0 for fractional T1 access for data services, see column 10, lines 9-23.

Regarding claim 8, with reference to figure 1, Bartholomew shows a plurality of terminal equipments 13, 17, 19, 25 connected to the channel bank 31. (Claimed

connecting a plurality of terminal equipment of at least one terminal type to a transmission-reception unit).

Regarding claim 14, the channel bank 35 (second unit) of Bartholomew can be regarded as a network termination unit, and the first unit as a network node.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartholomew in view of Tzannes et al, US (6,522,666).

Regarding claims 9 and 10, Bartholomew discloses substantially all the limitations of base claim 4, in addition as discussed above with reference to claim 5, Bartholomew discloses the use of a single eoc channel for controlling both concurrent data and voice, however Bartholomew does not explicitly disclose providing bits for operational control in data belonging to the terminal equipment types or services and arranging bits outside of a payload data region provided for the terminal equipment.

However, Tzannes discloses in the same field of endeavor, providing bits for operational control in data belonging to a terminal equipment type and arranging bits outside of a payload data region provided for the terminal equipment in a frame format. See column 3, lines 14-44.

Therefore, it would have been obvious to an ordinary person of skill in the art, at the time the invention was made to implement the EOC overhead method taught by Tzannes in Bartholomew system so that communication of concurrent voice and data by the terminal equipments of Bartholomew can be provided using ISDN digital subscriber lines standards.

Regarding claim 11, as indicated above with reference to claim 10, Bartholomew discloses providing bits for operational control in data belonging to a terminal equipment type (claimed allocating bits for operational control to an operating eoc channel, and that the eoc is embedded in a portion of the overhead channel in accordance with the established standards. (Examiner interpreted the portion of the overhead channel of having the eoc bits as being the claimed addressing the bits for operational control via a sub-address in a message format of the operating channel).

3. Claims 12, 13, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartholomew.

Regarding claims 12 and 22, while Bartholomew discloses ISDN connections in a frame as indicated above with reference to respective claims 4 and 1, it does not specify that the frame is a symmetric digital subscriber line frame.

However, symmetric digital subscriber line framing is a standard well known in the art. It would have been obvious to an ordinary person of skill in the art, at the time the invention was made to implement the method of Bartholomew of ISDN connections using the well known SDSL (Symmetric Digital Subscriber Line) framing technique so

that high rate ISDN DSL (Integrated Services Digital Network Digital Subscriber Line) (IDSL) can be implemented over a single copper line. The advantage would be the ability to provide rate adaptation that the SDLS standard provides

Regarding claim 13, Bartholomew discloses substantially all the limitations of base claim 4, except it does not disclose that the frame is symmetric digital subscriber line frame for carrying a plurality of traditional telephony connections.

However, symmetric digital subscriber line frame is well established standard, it would have been obvious to an ordinary person of skill in the art, at the time the invention was made to implement the traditional voice telephony of Bartholomew using the known SDSL frames so that advantage can be taken of the high bit rates that the SDSL along with the advantage of rate adaptation that the standard provides.

Regarding claim 23, Bartholomew discloses ISDN connections in a frame as indicated above with reference to parent claim 1, the connection belonging to at least two equipment type or services, however Bartholomew does not specify that the frame is a symmetric digital subscriber line frame. However, symmetric digital subscriber line frame is a well-known established standard. It would have been obvious to an ordinary person of skill in the art, at the time the invention was made to use an SDSL frame instead of ISDN frame for carrying Bartholomew voice and data so that the Bartholomew ISDN services can be provided using the well SDSN standard. The advantage would be the provisioning of adaptive rate that the SDSL standard provides.

Response to Arguments

4. Applicant's arguments filed October 05, 2005 have been fully considered but they are not persuasive.

Applicants stated on page 8, "With regard to the non-recitation of an SDSL link in claims 1, 4, 14 and 15, the discussion with respect to these claims utilized an SDSL link for purposes of clarity, however, the claims are intended to be interpreted broadly without such a limitation". Examiner point out that utilizing a SDSL for clarity is not equivalent to reciting the SDSL in the claim.

Applicants also stated on page 9:

"The description of the present application specifies the notion of synchronous transmission (with references to page/lines):

Finally, the object is also achieved by a method for transmitting a data stream in a frame belonging to at least one terminal equipment type, comprising the steps of synchronously inserting data of all terminal equipment types into the frame in a first unit; (2/27-28).

a traditional telephony connection, instead of the ISDN connection, can be synchronously transmitted in the SDSL frame... (2/27-28).

The narrow band and broadband data of the SDSL frame are transmitted synchronously in time-division multiplex between a first unit LT, a network node and the network termination NT (4/16-18).

The data transmission of the data in an SDSL frame occurs synchronously in time-division multiplex. The synchronization takes place with the assistance of the SDSL clock (5/3-5).

This is what is intended with respect to the synchronization contained in present claims 1, 4, 14 and 15.”

Examiner notes that the first passage (2/27-28) and the second passage (2/27-28) relayed upon are presented in the summary of the invention and thus do not clearly explain the disputed feature of “synchronous insertion”.

The third passage (4/16-18) deals with synchronous transmission in time-division multiplex, Examiner notes that the synchronous transmission in time-division multiplex is different than the “synchronous insertion” concept.

The fourth passage (5/3-5) also deals with the data transmission in SDSL frame occurs synchronously in time division multiplex. The deals with synchronous transmission in Time division multiplex.

Examiner notes that these passages do not contain the recited “synchronous insertion”, and therefore the claimed “synchronous insertion” should be interpreted as “synchronous transmission” instead. Therefore the transmission of concurrent voice and data of Bartholomew using the Multiplexer/Demultiplexer reads on the claimed limitations “synchronous insertion”.

Applicants argue on page 10 and 11 that Bartholomew fails to teach or suggest the synchronous insertion as claimed in claims 1, 4, 14 and 15, as well as new claims 22 and 23.”

Examiner notes, with the exception of claims 22 and 23, that applicant argument is not related to the claimed subject matter of claims 1, 4. Although the claims are

interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicants argue on page 12 that Bartholomew does not transmit an ISDN service. However it is not clear to what claim such argument is intended for, because most claims do not recite the ISDN service.

Applicants provided a lengthy argument on pages 13-17 (line12), however Applicant fails to address specific claims, and Examiner can't relate to a specific claim.

As to claims 9-11, Applicants argument refers to ISDN, voice, SDSL EOC in arguing the patentability of claims 9-11. However these claims do not recites the ISDN, voice, SDSL EOC. Limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Examiner believes, given the broadest reasonable interpretation of claim limitations, the rejection above is proper.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Bhagavash et al, US 6,374,288); Chaplik et al, US (6,693,916); Darveau, US (6,760,383).

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2668

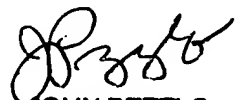
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHMED ELALLAM
Examiner
Art Unit 2668
January 6, 2006


JOHN PEZZLO
PRIMARY EXAMINER